Amendments to the Claims:

Claims 1, 7, 12, 15 and 20 have been canceled. Claims 2-6, 8-11, 13, 14, 16-19 and 22 have been amended herein. Please note that all claims currently pending and under consideration in the referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Canceled).

2. (Currently Amended) The method of claim 4, [[1]] wherein a radius of the diffraction ring is about eight-tenths of the wavelength of radiation, divided by a numerical aperture.

3. (Currently Amended) The method of claim 4, [[1]] wherein the at least one sidelobe inhibitor has side dimensions of about one-half of the wavelength of the radiation.

4. (Currently Amended) A method for mitigating sidelobe artifacts in a radiation-patterning tool design process, comprising: ~~The method of claim 1~~
defining elements to be formed in a radiation-patterning tool as a function of a wavelength of radiation to be used to create desired patterns and resultant mitigated sidelobes;
calculating a diffraction ring around each of the elements;
identifying at least one location where one diffraction ring from one of the elements intersects another diffraction ring from another of the elements; and
forming at least one sidelobe inhibitor across the at least one location, the sidelobe inhibitor being located to pass radiation in phase with the radiation passing through the elements, wherein the at least one location comprises a plurality of locations and wherein forming the at least one sidelobe inhibitor comprises:

defining a guard ring extending around each of the plurality of locations;

defining a common location in lieu of each of the plurality of locations when a portion of the guard ring from one of the plurality of locations is common with a portion of the guard ring from another one of the plurality of locations; and

forming the at least one sidelobe inhibitor across at least a portion of the plurality of locations or the common location.

5. (Currently Amended) The method of claim 4, [[1]] wherein the radiation-patterning tool comprises a reticle.

6. (Currently Amended) The method of claim 4, [[1]] wherein the radiation-patterning tool comprises a photomask.

7. (Canceled).

8. (Currently Amended) The method of claim 11, [[7]] wherein each of the mathematical descriptions of diffraction rings extends at a radius defined from a centroid of the mathematical description of one of the elements.

9. (Currently Amended) The method of claim 8, [[8]] wherein the radius of each of the mathematical descriptions of diffraction rings is about eight-tenths of the defined wavelength of radiation, divided by a numerical aperture.

10. (Currently Amended) The method of claim 11, [[7]] wherein the sidelobe inhibitors have side dimensions of about one-half the wavelength of the radiation.

11. (Currently Amended) A method of generating sidelobe inhibitors on a radiation-patterning tool, comprising: ~~The method of claim 7 further comprising:~~

defining a mathematical description of elements and diffraction rings around the elements to be formed in a radiation-patterning tool according to a defined wavelength of radiation intended to pass through the elements to create desired patterns and resultant mitigated sidelobes proximate to the desired patterns;

identifying mathematical descriptions of sidelobe inhibitors including guard rings therearound at locations where one mathematical description of a diffraction ring of one of the elements intersects another mathematical description of a diffraction ring of another of the elements; and

~~identifying a proximity of a first one of the at least one sidelobe inhibitor with at least one other one of the at least one sidelobe inhibitor; and~~

when one or more of the mathematical descriptions of the ~~at least one~~ sidelobe inhibitors including guard rings therearound creates ~~create~~ an overlap region ~~with respect to the at least one other one of the at least one sidelobe inhibitor~~, ~~identifying a common sidelobe inhibitor in lieu of the one or more of the at least one sidelobe inhibitor and the at least one other one of the at least one sidelobe inhibitor~~ forming a common sidelobe inhibitor on the radiation-patterning tool across at least a portion of the overlap region, the common sidelobe inhibitor being located to pass radiation in phase with the radiation passing through the elements.

12. (Canceled).

13. (Currently Amended) The method of claim 11, [[7]] wherein the radiation-patterning tool comprises a reticle.

14. (CurrentlyAmended) The method of claim 11, [[7]] wherein the radiation-patterning tool comprises a photomask.

15. (Canceled).

16. (Currently Amended) A method for designing a mask for illuminating a pattern, comprising: ~~The method of claim 15~~

defining elements to be formed in the mask;

calculating a diffraction ring around each of the elements, each diffraction ring including a radius coinciding with a location of sidelobes from a wavelength of radiation to create the elements; and

forming a sidelobe inhibitor across at least one intersection where a diffraction ring from one of the elements intersects a diffraction ring from another of the elements, the sidelobe inhibitor being located to pass radiation in phase with the radiation passing through the elements, wherein the at least one intersection comprises a plurality of intersections and further comprising:

defining a guard ring extending around each of the plurality of intersections;

defining a common intersection in lieu of each of the plurality of intersections when a portion of the guard ring extending from one of the plurality of intersections is common with a portion of the guard ring extending from another one of the plurality of intersections; and

forming the sidelobe inhibitor across at least a portion of the plurality of intersections or across the common intersection.

17. (Currently Amended) The method of claim 16, [[15]] wherein a radius of the diffraction ring is about eight-tenths of the wavelength of radiation, divided by a numerical aperture.

18. (Currently Amended) The method of claim 16, [[15]] wherein the sidelobe inhibitor has side dimensions of about one-half of the wavelength of the radiation.

19. (Currently Amended) A computer-readable medium having computer-executable instructions thereon for determining the placement of sidelobe inhibitors relative to elements to be formed on a radiation-patterning tool, comprising:

calculating [[a]] diffraction rings ~~ring~~ surrounding each of a plurality of elements, the diffraction rings ~~ring~~ coinciding with an approximate location of a sidelobe corresponding to a wavelength of radiation for the radiation-patterning tool;

calculating ~~an~~ intersects ~~intersect~~ of the ~~a first~~ diffraction rings ~~ring~~ with other ~~another of the~~ diffraction rings; ~~and~~

identifying the intersects ~~intersect~~ as locations ~~a location~~ to place ~~one of the~~ sidelobe inhibitors; and ~~, each of the sidelobe inhibitors being located to pass radiation in phase with the radiation passing through the elements~~

when one or more of the sidelobe inhibitors including guard rings therearound creates an overlap region, identifying a common sidelobe inhibitor for the radiation-patterning tool across at least a portion of the overlap region, the common sidelobe inhibitor being located to pass radiation in phase with the radiation passing through the elements.

20. (Canceled).

21. (Previously Presented) The computer-readable medium of claim 19, wherein the calculating a diffraction ring includes calculating a diffraction ring having a radius of about eight-tenths of the wavelength of radiation, divided by a numerical aperture.

22. (Currently Amended) The computer-readable medium of claim 19, further including forming the common sidelobe inhibitor ~~inhibitors~~ to have side dimensions of about one-half the wavelength of the radiation.

23-26. (Canceled)